

# *The Heterodyne*

*Newsletter of the West Valley Amateur Radio Association*

## **NEXT MONTHLY MEETING**

**Wednesday February 16**

Meetings Begin at 7pm at Silicon Valley Chapter of the American Red Cross  
2731 N First St, San Jose (SW corner at Plumeria Dr)

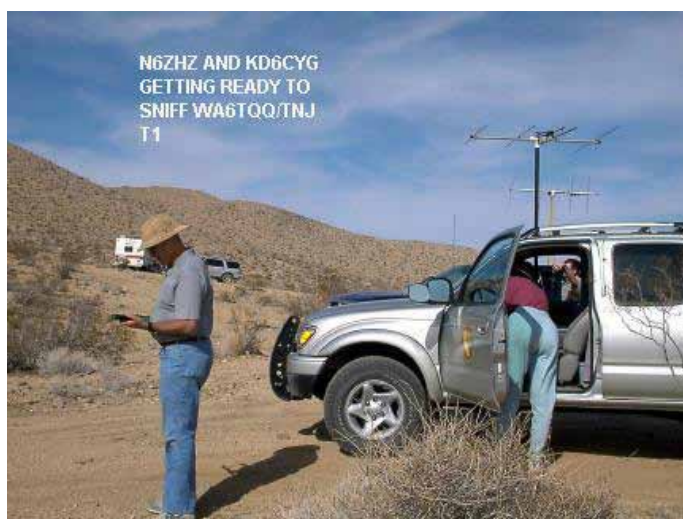


### **February 16 Meeting “Tools-n-Tips for Transmitter Hunting” by Don Ferguson, KD6IRE**

Don plans to focus on real world use of a Beam, Loop, Body Fade, Attenuator, Waveguide tube, Doppler, Interferometer, & TOA (time of arrival), antennas and special receivers and a Fox Box.

Don moved to California in 1976 with IBM for 34 years and became a Ham operator in 1992. His primary radio interests are in T-Hunting and working Amateur Satellites. He is the current President/CEO of Project OSCAR Inc. and is the Team leader of “Tracking and Recovery” for the California Near Space Project.

Don and his wife, Linda (KE6BEO), take part in monthly Bay Area T-Hunts and he has setup and hosted two Elementary School Contacts with the International Space Station Astronauts. Don hosts the EchoIRLP node for the W6RLW state wide repeater system on 1.2GHZ.



**Amateur Radio Technology Day  
Saturday, Feb 19  
8am to 6pm**

<http://www.fars.k6ya.org/amtechday>

**62nd International DX Convention**  
**April 15 - 17, 2011**  
**Visalia, California**

Registration For IDXC 2011 Is Now Open!

Online Registration Allows Payment  
Via PayPal or Credit Card

Visit <http://www.dxconvention.org>

**New Rates for ARRL Outgoing QSL  
Service, effective January 17, 2011:**

\$2.00 for 10 cards or less, in one envelope.

\$3.00 for 11-20 cards in one envelope.

\$0.75 per ounce for packages of 21 or more  
cards.

**Club Net**

WVARA's club net is on the W6PIY repeaters each Tuesday at 8:30 pm. All repeaters are linked together during the net. The net script can be found at <http://www.wvara.org/net.html>.

<b>WVARA Repeaters (W6PIY)</b>			
<b>Band</b>	<b>Frequency</b>	<b>PL</b>	<b>Status</b>
6 Meters	52.580- MHz	151.4 Hz	Operating
2 Meters	147.39+ MHz	151.4 Hz	Operating
1.25 Meters	223.96- MHz	156.7 Hz	Operating
0.70 Meter	441.35+ MHz	88.5 Hz	Operating
0.23 Meter	1286.2- MHz	100 Hz	Operating

**A Bit Of DXCC History, With Thanks to Google**

By Mike Flowers, K6MKF

I was showing off my shack 'wallpaper' to my family over the holidays, and the discussion turned to my DXCC Certificate #43,670 hanging in its place of honor. After the seasonal socializing wound down, I began thinking of the 43,669 Amateurs who had achieved their DXCC before I managed to do it, and this led me to ask the question: Who earned DXCC Certificate #1?

A bit of research through Google soon lead me to Frank Lucas, W8CRA-W3CRA. Unfortunately, Frank is now a Silent Key; he passed away in 1982. Frank earned DXCC Certificate #1 in 1939. There are a number of excellent articles on the web about Frank, his station in Canonsburg, PA and his many DX accomplishments. Notable among these are these articles:

<http://hamgallery.com/Tribute/W3CRA/> - the main article with links to other pages.

<http://hamgallery.com/Tribute/W3CRA/ng6w.htm> - shows a number of period photographs of Frank and his station.

<http://hamgallery.com/Tribute/W3CRA/ng6w2.htm> - shows pictures from a 1986 visit to the W3CRA-W8CRA site.

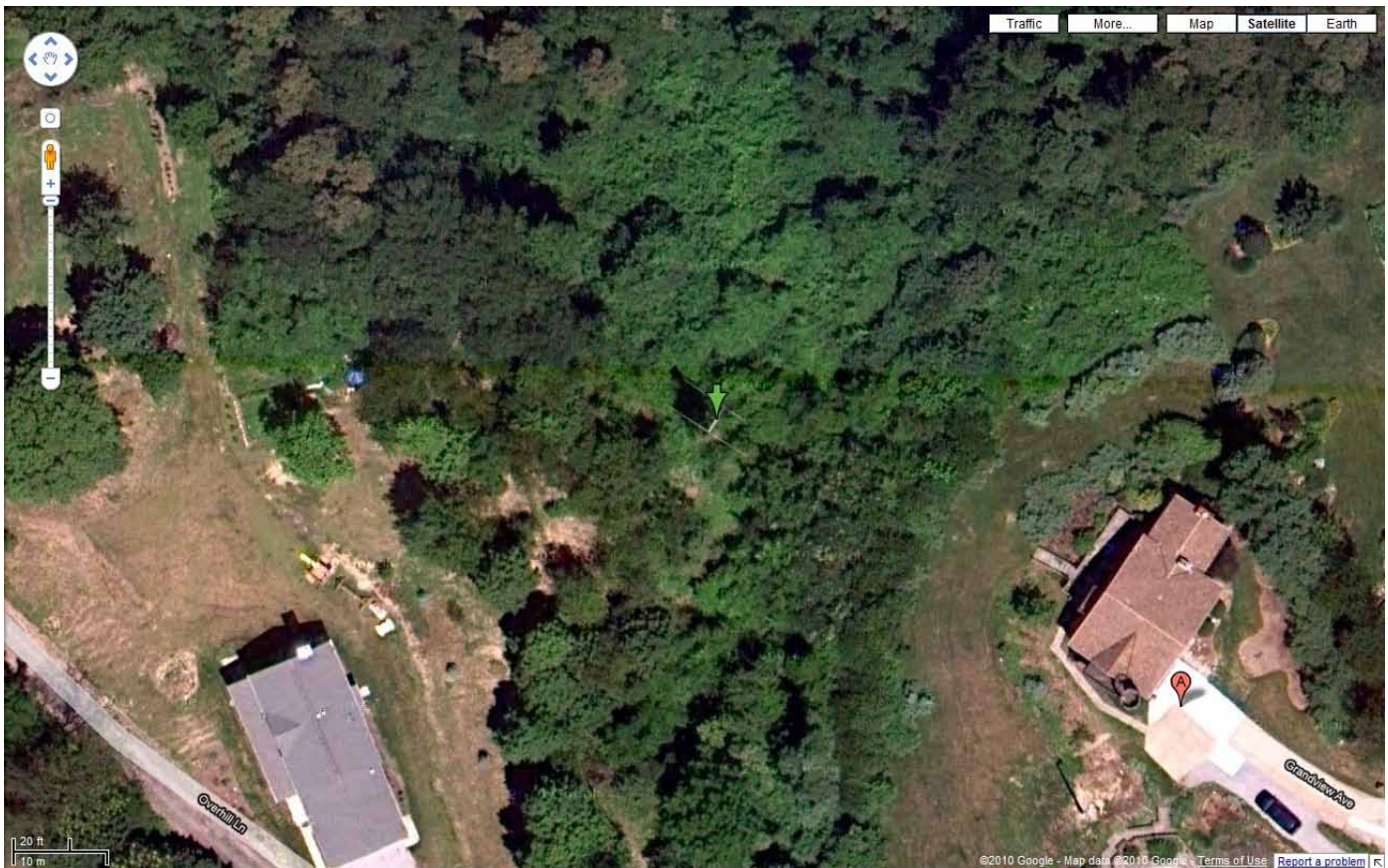
<http://hamgallery.com/Tribute/W3CRA/W3CRA.pdf> - which presents a number of stories and reminiscences about Frank.

<http://users.vnet.net/btippett/w3cra.htm> - which gives an interesting HFTA analysis of Frank's QTH and some clues to why Frank had such a great DX signal.

I began to wonder if I could use Google Maps, or even Google Earth, to find any remnants of the W3CRA shack or even the tower. Using a map I found in one of the online articles as a starting point, with Google Maps I was able to find the remains of Frank's yagi. You can



see it too. Go to Google Maps and put these coordinates in the address field: 40.244839, -80.181494. Switch to the Satellite view and zoom down on the image and you should see what I see:

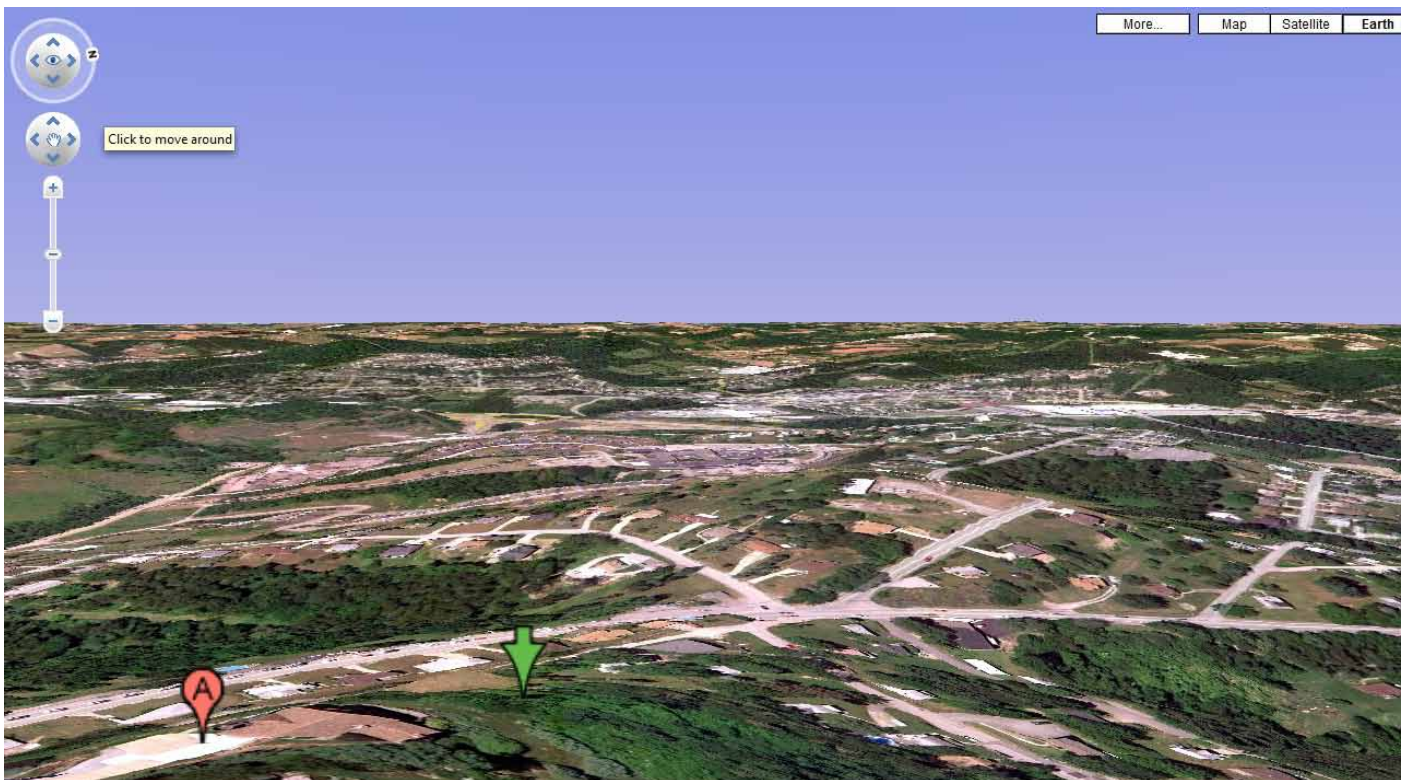


This must be it. The northeastern element is shorter, just as it is shown in the other pictures on the web.



Close-up of the W3CRA Beam

Now switch to the Google Earth view and you can get a rotatable view of the topography and get an idea of why this was such a great QTH. Here's the view to the West, a great shot into Asia:



I thought it was amazing that I was able to locate such an important site in DXCC history simply by searching the web. I wonder what other historical Amateur Radio sites and even artifacts are waiting to be discovered?



W3CRA Tri Leg Tower and Beam, courtesy of hamgallery.com

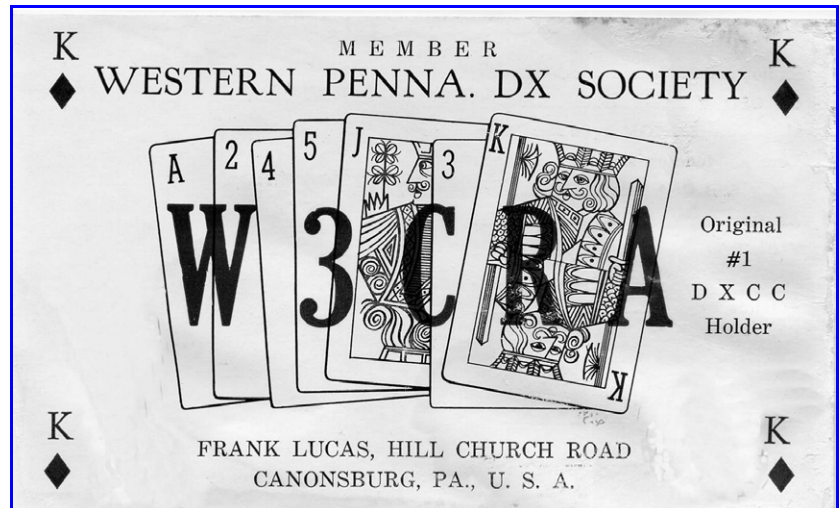


## A Tribute to Frank Lucas, W3CRA

By Bob Ballantine, W8SU

Frank Lucas - W3CRA - \*1909-1982\* Born 25 June 1909 to John and Eva Hutchison Lucas at Canonsburg, Pa. Frank, who originally was W8CRA at Canonsburg, Pa., due to western Pa. prewar, those days was part of the 8<sup>th</sup> District. Eventually western Pa would be in the third

district. - Frank married Agnes E. Wischmann in 1938 and had a son Dennis Lucas, Frank on the marriage application was age 28 and an electrician. Frank would be Service Manager for Imperatore Ford Agency 601 West Pike St. Canonsburg. Imperatore Ford was very helpful and courteous to us on our visit.



Pat and I along with W8MTC from Newton Falls, one fall day (Oct 9 - 1991) would take a trip to Canonsburg in an attempt to find Frank's old QTH. I wondered too if we would find the ghost of Perry Como. After working at the courthouse we still did not have a clear lead where Frank lived so we located and visited Imperatore Ford on West Pike and were given very helpful information. They still remembered Frank and told how a great guy he was and a pleasure to work with. Instructions were, go 4 lights on Pike, make right into Central Av (SR519) cross bridge and RR tracks get to hill area where starts to climb you will see a lane almost at the top of the hill turn left and you will see Frank's home and garage. Sure enough, we could view the tower and monobander long before we arrived at the intersection. In the earlier years there was never a definitive call book address location given. Frank wanted it that way.

\*DX luminary the venerable Gus Browning W4BPD mentioned the following on an Aldabra expedition, about our great ham and unusual Western Pennsylvania amateur station. After staying up for the long path opening to the U.S. which was 0400 local time. I intended sleeping on a small bunk at the rear of the boat. After lying down for a while and wondering about the 5 nine plus 20 db signal that signs W3CRA when all the others on the bands are S7, I came to the conclusion that Frank must have the world's best QTH. When the band is dead he's always S7 and when the W-boys are S7 Frank is always over S9. It just isn't once in a while, it's an every day occurrence.

\*Dave K4JRB; Some stations can be big guns without having at least 5 towers. I recall W3CRA was reported so loud in Tibet that he was 2 S units higher than any other USA 20M station. This site once housed a commercial SW BC station. He used a 3 ele 20M home brew Yagi. Pick the location first then spend the money.

\*J.W.Nash K4HMS - Frank W8CRA DXCC Cert #1 (Pre War) The first great American DXER. He has been badly slighted and no doubt should be in the all time great category. Lucas possessed one of the greatest ears of all time - He was reportedly able to identify almost every DX call on the air during the 1930's by the fist, the impact of propagation on the signal and other individual characteristics.

\*Jules Wenglare, W6YO & pre-war W8DVS - W8OSL; **“MR DX”** A title most deserving has become a memory, sadly in more ways than one. Mr. Lucas W3CRA Pre-war W8CRA became a silent key on 23 Oct 82. Fifty years ago he was already working the world on 20 meters, when the total bona fide countries who had any active ham operators would not have added up to 100, some of the Asian and African countries were lucky to have one or two. But as they came on during the early, mid and late 1930's W8CRA didn't miss any.

I remember our first visit during 1931 with cohorts W8BSF and W8CXX to prove to ourselves whether this guy was really hearing and working this rare DX, none of us, who lived 25 miles away, were even hearing it. W8RTD – W8LTH were pals too.

It didn't take too many weekend visits to realize this very likeable guy had the utopia for Dxing. In the following years, it was incredible to see so many QSL cards from rare countries, not only with QSA5 R9 T9x reports, but with remarks such as, “U are my W QSO.” Not many USA stations can claim those remarks.

Frank and Clark Rodimon, W1SZ – also a top DXer and editor of QST at the time – formulated the DX Century Club. Soon after its announcement, W8CRA became DXCC NR.1 – For a guy who didn't QSL that much, it was an achievement. Without a doubt, W8CRA's location near the tope of one of the highest hills in western Pennsylvania near Canonsburg, was his good fortune. His simple antenna for many years was an end-fed wire 133 ft long, 33 feet high.

The first rig I remember seeing in his small shack, a new modern building about 6 by 8 feet in size, was a Colpitts using a Cunningham 210 tube. The receiver had two tubes, the quietest and smoothest regeneration action anyone could ask for, dry cells for filaments and a burgess 22 and a half volt “B” battery ran it.

Frank was a perfectionist in building and making all his equipment work extremely well. Nearly every year there were changes. MOPA followed the Colpitts then crystal control and then VFO, in the PA, tubes like 852, HK354 then the Eimac 250<sup>TH</sup>. Frank's bigsignal and his achievements prompted Eimac to use pictures of his station in one of their first ham station ads in QST during the late 1930's. During the period of the 30's he installed a 70 foot three legged Wincharger Tower and a three element home made Yagi. After WW II, his activities ran hot and cold.

He did build up a 4 by 1 linear, but he still preferred CW. In my opinion, Frank was very modest; he was not one to boast of his DX worked.

An admired pre-war big gun, Herb Becker W6QD, – If I am correct – wrote in his DX section in Radio Magazine of that time, “My visit to W8CRA’s place was like a Moslem going to Mecca. Then in the 60's, Gus Browning wrote after one of his super Dxpeditons, “I so well remember the S7 signal from W3CRA over the Indian Ocean and up in the AC spots, when no other USA station was even being heard.” With those remarks by Herb and Gus, no need to add any more except it would be a tribute to consider Frank Lucas, W3CRA for the DX Hall of Fame. (WR Feb 83)

\*W8MTC Mike Serotko of Newton Falls, O -An interview on August 6 - 1986 Frank had visitors from Calif years ago to check on Franks station as they could not believe in reality how easy it was for him to work DX. Frank instituted DXCC having Cert. #1. Serotko said we were both Slavs. A close friend Ben Moore N3BM said Frank was hated too, one guy out in Illinois 9<sup>th</sup> district told Frank he was going to kill him. Seems that the W9 thought he had a good station and worked a certain rare country, Frank came on and said “No you didn’t, you didn’t even get the correct report!”

I had a chat with WO3Z on 40M CW in the Nov 1991- Jim Tommasin at 84 Pa. Jim said he lived 5 miles away from Franks location on Hill Church Road. It truly was a special location and Frank worked strictly 20M CW. Frank was accused of being a womanizer however, truly, his radio shack was his “girl.”

Frank Moger a neighbor of your writer, visited Frank’s station in the 1950's and had lingering good remembrances of the visit when Frank was a seasoned operator. Moger told your author in Aug 1991, Lucas was a quiet man, a rolly-polly guy with Good Ears! He was not a joiner, no local clubs, his shack consisted of a 16 by 24 foot oil heated shack in his parents back yard about 400 or 500 ft from the house leading up a hill. Ontop of the hill you could look towards Cleveland and view 6 or 8 Air Craft Lighted Beacons spaced 30 or 40 miles. Best view southwest and west, worst on Africa direct. He experimented setting up an antenna on top of the hill and it didn’t have the qualities that he had with the antenna system on the side of the hill. He placed the system back in service on the side of the hill where it remains to this day. He ran wire antennas and low power to a 50 foot telephone pole in the 30's, using a reworked HRO-7 and heard and worked marvelous DX.

The Lucas station eventually used a rotary beam and fed it with 2 pieces of coax using a balanced system, because of the long run up the hill. He caught immense lightening. There was a report that Arkie W8NBK during the war heard Frank in a bomber in the middle east believe Aden at 7 or 8 thousand feet, hearing Frank like he was next door. Frank lived in an apartment in his later years and would come out to the station and stay all weekend, working DX and smoking Camels.

One of Franks best friends was W8BKP in Washingtonville, Ohio. George told your author, they would DX, drink beer and smoke Camels when it wasn't a sin to do so. Lucas enjoyed the area ham fests and was a regular attending them.

Frank Lucas W3CRA truly a forgotten link in the DX Community. Your author recalls those CQ's from Frank's station at 2 in the morning when the 20M band was dead, but somehow Frank managed to snag a rare one.

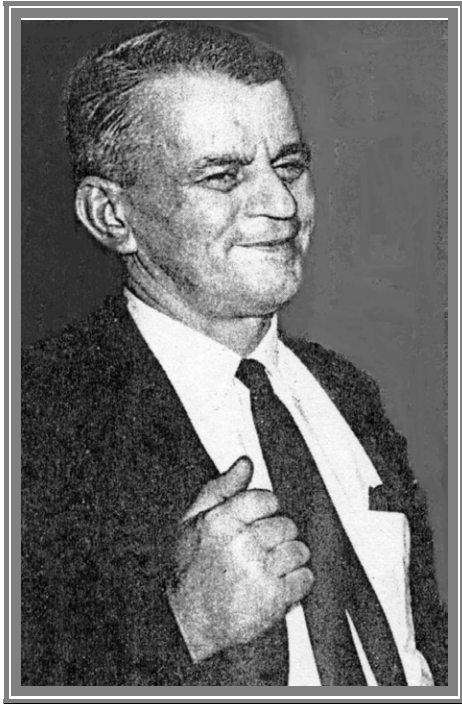
As mentioned neighbor Frank Moger here in the Warren, Youngstown region in our discussion, Moger an antenna design enthusiast mentioned in the Canonsburg area at the Lucas QTH, regionally mined throughout the years would lend to the belief of magnetic mass influence. Ideas of H.F. site impairment & enhancement by magnetic masses, etc., under the ground surfaces are superstitions, according to an article in QST Sept 66 by Paul Rockwell W3AFM. He would attribute an unusually good location by "Siting." The matter of good siting has been appreciated by amateurs for many years. Recent work has made the criteria more clear. For the long hauls, the higher the antenna, the better. Try for a take off angle main lobe at 1 degree elevation. It is especially effective to locate an antenna of modest height on a Cone Shaped Hill on which the ground slopes downward in all directions for a thousand feet or so at an angle of, 20 degrees. Some conspicuous examples of well-sited stations are W3CRA - W4KFC and W6AM. These stations have in some directions radio horizons at distances of 20-50 miles.

The advantage of a good site or high antenna can be of the order of 10-20db compared with modest suburban neighborhood installations. It leads to situations where the "mortals down below" can't even hear traces of the other end of comfortably solid DX QSO's.

On a trip to the Gaithersburg MD hamfest with friend N3BM, Lucas had a heart attack and suffered pain all night long. Moger advised that Lucas began to have heart problems in the late 70's and went down hill in a hurry and expired October 23, 1982. Thus ending a great venture into ham radio ending 50 interesting unusual years.

Don Karvonen of Apple Creek, Oh K8MFO, well known DX guy and key collector said; I met W3CRA at the Warren Hamfest a year or so before he passed on. His health was very poor, but he was still working for an auto dealership in his home town. Man I can still remember what 20 meters sounded like after Frank called a long CQ DX! He would be very deliberate about listening to the pileup and try to come back to the rarest thing he could hear! Karvonen has a number of rare photos from the estate of Arkie W8NBK, Frank Lucas is in a couple. Back in those days everyone wore suits when they went to Dayton and it is great to see Frank, Arkie, Al Hix and others dressed in their Sunday best. Your author is asking Don for a copy of CRA pix.





Frank Lucas - 1909-1982

W3 Charlie Romeo America is now assigned to "Collins Radio Association" Sidman, Pa. W3ST Dr. David Knepper – Trustee. The call lives again however not on CW where Frank Lucas was King of the Hill. We will miss his sweet sound and unusual capabilities to pick up the weakest of the weak DX signals around the globe.

Is your author qualified to write about Frank Lucas? I have never met Frank to my knowledge however I am sure I have attended the same functions and didn't recognize him. I have been in his ham shack out at Cannonsburg and viewed the unusual antenna setup. The rusted Vibroplex Bug and hulk of a HT32 transmitter still rests on a desk next to the walled linear 4 by 1 amplifier that has been stripped out. I have chatted with dozens of folks who knew Frank and compiled the data into a good story, capable of telling a very accurate story of his ham activities.

My good XYL Pat KK8W, Mike W8MTC and I on our marvelous trip to Canonsburg on that humid, hot & windy day of October 9<sup>th</sup> 1991 will never forget the magnificent view, taking pictures, exploring the old crumbling shack and finding W3CRA QSL cards in a rack holder near the doorway entrance. Most of the cards had gotten wet over the years and were sticking together however we managed to salvage about 3 or 4 and have one today as a keep sake of the visit. The shack roof had gaping holes, the equipment mainly removed however a Vibroplex bug and remnants of an HT32 were still there, rusted, as if awaiting the owner to start up again and be King of the Hill. I have a HT-37 in my collection and that old venerable Hallicrafters transmitter sounds just as good today as it did 45 years ago. Op Note; Dennis Lucas, Frank's son is Master of Arms F&AM Canon Lodge #204 – W8SU 2002

**Added 6 Aug 2002; I couldn't help but think of W3CRA Frank Lucas today. Author has been waiting to add Burma in the log on CW. An international group are over there now for a few weeks and were heard yesterday. I got up early 6 Aug 2002 and was in search for the Burma expedition using the call XY3C. Sure enough at 1130am eastern time, they were on CW 21.017 working Europeans. Some USA stations got thru and I started in earnest calling them with the key. In about 5 minutes the two way contact was made to that far away place in Rangoon, Burma which is now called Republic of Myanmar. Not recognizable any longer as Burma. Frank would be proud.**

CONTINUED

**Added 8 Sept 2002; CQ Article Oct 1945 by Court Matthews W6EAK** – Home Territory W8CRA; At the risk of offending some of our West Coast brethren we are forced to dig into the hat and pull out W8CRA. A DX'er and rag chewer deluxe, Frank Lucas kept the ether buzzing in the four corners of the globe for years. First achieving prominence for his ability to work scores of Asiatic stations when nobody else in the eastern U.S.A. Could even hear 'em.

Frank proved his versatility by laying down an outstanding signal all over the world. Starting modestly with the old faithful 210, W8CRA finally worked up to the high power class, but he could always do better with 10 watts than we could with 1 KW – Much to our envy.

We're looking forward to the day when we can get that post-war dream rig on the air and give Frank some real competition. But we know it won't be easy, W8CRA had that "extra" push that's hard to beat. W6EAK CQ Magazine October 1945. Editors note; Article complete with a picture of the W8CRA station using breadboard style gear and walls filled with DX cards.

This story is dedicated to W8MTC Mike Serotko 1914-2010 - he was the enthusiasm that made the trip possible. Bob Ballantine, W8SU.

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## **2011 West Valley Amateur Radio Association Officers**

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**See you at the meeting on Wednesday, February 16!**